

University of Groningen

Book review of Robert G.W. Anderson (ed.), The Cradle of Chemistry: The Early Years of Chemistry at the University of Edinburgh (Edinburgh: John Donald, 2015)

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Published in:
Isis

DOI:
[10.1086/688366](https://doi.org/10.1086/688366)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2016

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Verwaal, R. (2016). Book review of Robert G.W. Anderson (ed.), *The Cradle of Chemistry: The Early Years of Chemistry at the University of Edinburgh* (Edinburgh: John Donald, 2015). *Isis*, 107(3), 634-635.
<https://doi.org/10.1086/688366>

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countries throughout the early modern period. But although Marcon has left these topics open for future historians to investigate, those who explore these subjects over the coming years will undoubtedly be grateful for his thorough and stimulating account of “the knowledge of nature and the nature of knowledge.”

Daniel Trambaiolo

Daniel Trambaiolo is Assistant Professor of Japanese Studies at the University of Hong Kong. His research focuses on the history of medicine and pharmaceuticals in East Asia. He is working on a book titled “Ancient Texts and New Cures: Transformations of Medical Knowledge in Early Modern Japan.”

Robert G. W. Anderson (Editor). *Cradle of Chemistry: The Early Years of Chemistry at the University of Edinburgh*. xvii + 198 pp., illus., index. Edinburgh: John Donald, 2015. £25 (cloth).

This collection of essays celebrates the third centennial of chemistry education at the University of Edinburgh. Edinburgh’s popularity among medical students in the eighteenth century is well known, and famous chemists such as William Cullen and Joseph Black have been amply studied. Nevertheless, *Cradle of Chemistry* “contains the closest investigation of a period of chemical history as seen through the medium of a teaching institution” (p. 6). Indeed, this volume is a welcome addition to current scholarship, asking why chemistry flourished in Edinburgh in this time. What was so distinctive about this university?

The volume opens with two essays tracing the powerful influences on Edinburgh chemistry. John Henry shows that many Scots played a leading role in the adoption of Newton’s works, arguing that Newtonianism was significant in the Scottish Enlightenment. Delving into the actual chemical education at Edinburgh, John Powers investigates the lectures of the first professor of chemistry, James Crawford, and his successor, Andrew Plummer. Powers’s nuanced study shows that, while both professors had to a large extent adopted the influential teachings of Herman Boerhaave at Leiden, Edinburgh chemistry was distinctive in that it increasingly withdrew from medicine and drew closer to “philosophical chemistry” and practical, industrial applications.

The next three chapters explore the attitudes and practices of students and teachers, analyzing the characteristics of Edinburgh pedagogy. Georgette Taylor’s excellent chapter reexamines the teachings of Plummer, which, compared to William Cullen’s, have often been judged negatively. On the basis of her close analysis of testimonies and student lecture notes, Taylor instead argues that Plummer was a highly competent chemist but that students’ expectations had changed over the course of the eighteenth century. Rather than dictating his lectures, Cullen actively involved students by questioning them and providing extracurricular sessions at his home to discuss new ideas. John Christie’s perceptive essay analyzes student dissertations and societies during the lectureships of Cullen and Joseph Black. He argues that the ethos of the Edinburgh school manifested itself in the students’ independent and critical attitudes toward theories and experiments and in their “at times anti-professorial agonistic liberty” (p. 96). The collaborative exchanges between lecturers and students are also discussed in the chapter by Matthew Eddy, who focuses on the specific use of Black’s diagrams (depicted in the section of black-and-white plates), which were designed to be visually simple figures for students to copy and understand.

The following three chapters direct the reader’s attention to material remains. The archaeologist Tom Addyman reports on the remarkable discoveries made during excavations at the Old College site in 2010 and 2011. In the rubble-filled cellars of the library, Addyman found glass rods, ceramic vessels, metal spoons, chemical compounds like mercury, arsenic, and cobalt, and other chemical artifacts. A color-plate section nicely illustrates the excavations and reconstituted vessels found among the debris. Addyman concludes that the findings were the property of Black and Thomas Charles Hope and that the lower part of the library probably functioned as storage. Alison Morrison-Low’s subsequent essay asks whether these findings

can be linked to the carefully preserved laboratory glassware in the Playfair Collection in the National Museum. Her insightful yet short piece certainly begs for more research on the material culture of Edinburgh chemistry. Peter Morris solves the question of where Black's house was located. Although studying the location of professors' houses may indeed prove useful—especially because men like Cullen also taught at home—the details of how Black's house was converted into Blind Asylum and Uptown Disco may not particularly interest most readers.

The last two chapters turn to chemistry education in the nineteenth century. Robert Anderson assesses the lectures of Thomas Charles Hope, who modeled himself after Black and held the chair of chemistry for almost half a century. Hope's reputation as a conservative, pompous, and dull teacher is unjustified, Anderson demonstrates. Yet his dropping of practical chemistry and restricting entrance to the laboratory did signify a general decline of Edinburgh chemistry. Andrew Alexander traces the lives and works of prominent Edinburgh chemists in the nineteenth century, best characterized by Professor Alexander Crum Brown's remark upon opening the new laboratories in 1884: "A Golden Cage, but will the birds sing?" (quoted on p. 175). Indeed, the exceptional days of Cullen and Black were over, and Edinburgh chemistry became mediocre at best, with occasional breakthroughs by assistants and students. Hasok Chang aptly concludes that, ultimately, the flourishing of Edinburgh chemistry cannot be explained by any particular research agenda—despite Joseph Black's important contributions—but, rather, by the tradition of methods and customs of pedagogy.

The book under review presents a nuanced vision of the first two centuries of Edinburgh chemistry. While some chapters are less incisive than others, the volume in its entirety makes for excellent reading. The section on the material legacy is a welcome addition and will, I hope, stimulate further research. Together with Anderson's introduction and Chang's lucid afterword, *Cradle of Chemistry* offers a coherent and insightful account of the early years of chemistry at the University of Edinburgh.

Ruben E. Verwaal

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Anita Guerrini. *The Courtiers' Anatomists: Animals and Humans in Louis XIV's Paris.* xiv + 344 pp., figs., bibl., index. Chicago/London: University of Chicago Press, 2015. \$35 (cloth).

Early modern dissection has traditionally been conceptualized as a demonstrative, descriptive practice, rather than as an experimental one that generated new knowledge. This vivid monograph, based on extensive archival research, challenges that view, showing how dissection played a key part in the development of seventeenth-century science. Anita Guerrini argues that animals played a central role "in the birth of the experimental method as well as in natural history and the reconfiguration of the human and animal body." *The Courtiers' Anatomists* revises the standard interpretation of René Descartes as the key figure in "establishing the philosophical basis for animal experimentation in the seventeenth century," exploring many contemporary views about animal consciousness, some more prominent than those of Descartes (p. 3).

The book is rich in careful analyses of anatomical and textual practices in their courtly, intellectual, and cultural contexts. Guerrini's sources range from printed tomes to minutes of meetings of the Paris Academy of Sciences to students' notes from lectures given at the King's Garden. The early chapters bring to life the institutional, private, and public spaces of anatomy and dissection in seventeenth-century Paris. Chapter 2 introduces the mid-seventeenth-century debates on dissection's potential contributions to ex-